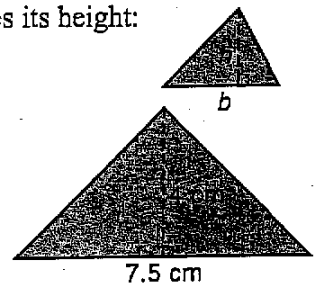
Name _____ Date _____

7-6 Study Guide

Integration: Geometry
Area of Triangles and Trapezoids

The area of a triangle is equal to one-half its base times its height: $A = \frac{1}{2}bh$.



Example 1 **Find the area of the triangle.**

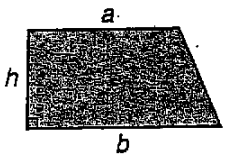
$A = \frac{1}{2}bh.$

$A = \frac{1}{2}(7.5)(4)$ $\quad b = 7.5, h = 4$

$A = 2(7.5)$

$A = 15$ The area is 15 square centimeters.

The area of a trapezoid is equal to one-half its height times the sum of its bases: $A = \frac{1}{2}h(a + b)$.



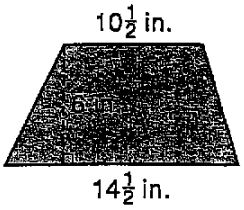
Example 2 **Find the area of the trapezoid.**

$A = \frac{1}{2}h(a + b)$

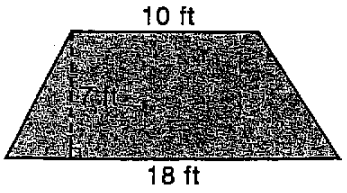
$A = \frac{1}{2}(6)\left(10\frac{1}{2} + 14\frac{1}{2}\right)$ $\quad h = 6, a = 10\frac{1}{2}, b = 14\frac{1}{2}$

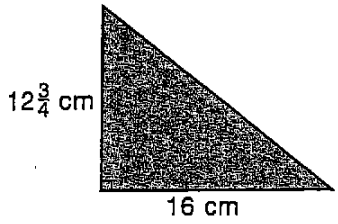
$A = 3(25)$

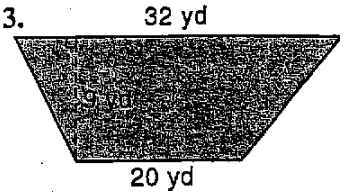
$A = 75$ The area is 75 square inches.

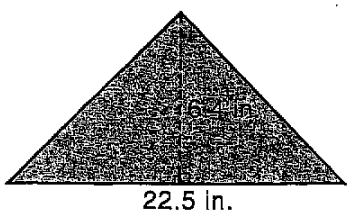


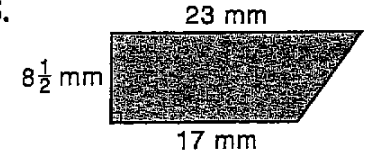
State the measures of the base(s) and the height of each triangle or trapezoid. Then find the area of each figure.

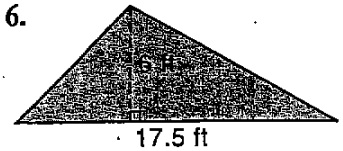
1. 

2. 

3. 

4. 

5. 

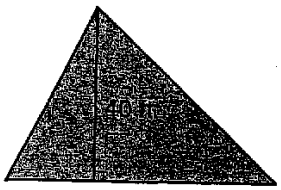
6. 

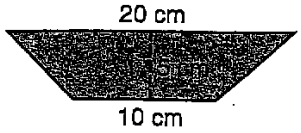
Name _____ Date _____

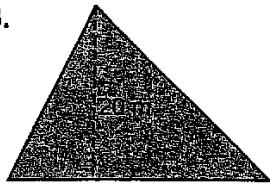
7-6 Practice

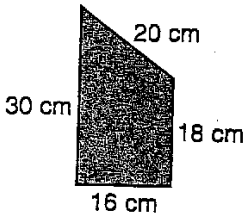
Integration: Geometry
Area of Triangles and Trapezoids

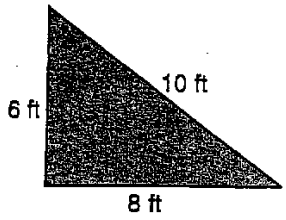
Find the area of each triangle or trapezoid.

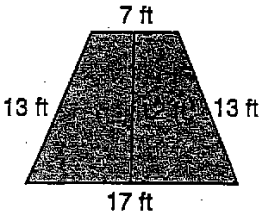
1. 

2. 

3. 

4. 

5. 

6. 

Find the area of each figure.

7. triangle: base 16.4 cm; height, 18.8 cm

8. trapezoid: bases, 3.2 ft and 3.4 ft; height, 2.6 ft

Find the area of each triangle.

	base	height
9.	1.6 cm	1.5 cm
10.	46 ft	28 ft

Find the area of each trapezoid.

	base (*a*)	base (*b*)	height
11.	16 ft	22 ft	14 ft
12.	12.4 cm	18.6 cm	10.2 cm

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